Applicant: Atala et al. Serial No.: 09/114,810 Examiner: Rodriguez Group Art Unit: 3763

List of all the claims

1-91. (Canceled)

- 92. (New) A device for administration of topical therapeutic agents, comprising an applicator for applying an effective amount of a therapeutic agent to a tissue surface of a subject; and an ultrasound transducer, operatively coupled to the applicator, for providing ultrasound energy to the tissue surface at least one predetermined frequency to promote absorption of the agent through the tissue of the subject, wherein the ultrasound energy has a duty cycle greater than about 10%, and wherein the ultrasound transducer further comprises at least one oscillating element capable of generating ultrasound energy at a frequency of greater than about 500 kHz and less than or equal to about 3MHz, whereby the frequency promotes the therapeutic effect of the therapeutic agent.
- 93. (New) The device of claim 92, further comprising a pressure-sensitive switch.
- 94. (New) The device of claim 92, wherein the ultrasound transducer further comprises at least one oscillating element capable of generating ultrasound energy at a power of about 0.02 to about 3 watts/cm².
- 95. (New) The device of claim 92, further comprising a controller for varying the frequency of the ultrasound energy.
- 96. (New) The device of claim 92, further comprising a controller for varying the power of the ultrasound energy.
- 97. (New) The device of claim 92, further comprising a compliant skin contacting material.
- 98. (New) The device of claim 92, further comprising a detector for monitoring feedback signals from the transducer.

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99. (New) The device of claim 92, wherein the tissue is a penile tissue and the therapeutic agent is selected from the group consisting of papaverine, prostaglandin E1 (PGE 1), prostaglandin E2 (PGE 2), prostaglandins, organic nitrites, inhibitors of the renin-angiotensin system, inducible Nitric Oxide Synthase (iNOS) agents, enzyme inhibitors, vasoactive agents, phosphodiesterase inhibitors, and smooth muscle relaxant.

100. (New) The device of claim 100, wherein the phosphodiesterase inhibitors are phosphodiesterase type 5 inhibitors selected from the group consisting of sildenafil and alprostadil.